

IN THE CLAIMS:

Claims 1-16 (Cancelled)

17. (New) Apparatus for opening and closing a door which is arranged on a vehicle so that it can slide in a door opening in the vehicle, the apparatus comprising:
 - a) an engaging element connected to the door,
 - b) a drive wheel designed to act upon the engaging element,
 - c) a transmission operatively connected to the drive wheel, the transmission being designed to transmit power to the drive wheel via at least a first gear and a second gear so that the drive wheel can be driven in a first gear and a second gear, the first gear being a higher gear and the second gear being a lower gear,
 - d) a position sensor connected to the sliding door or arranged in the door opening of the vehicle and designed to detect when the sliding door has reached a predetermined position in the door opening, the said sensor being operatively connected to the transmission, so that the transmission changes gear from the first gear to the second gear when the door, in moving towards a closed position, reaches the predetermined position.
18. (New) Apparatus according to claim 17, wherein the transmission furthermore has a neutral position so that the drive wheel can rotate freely.
19. (New) Apparatus according to claim 17, wherein the engaging element comprises a cable designed to run around pulleys arranged on the vehicle and around the drive wheel, that the transmission is arranged in a housing and that the drive wheel is arranged outside the housing of the transmission.

20. (New) Apparatus according to claim 17, wherein the engaging element comprises a gear rack and that the drive wheel is a pinion.
21. (New) Apparatus according to claim 17, wherein the position sensor is operatively connected to the transmission in that when the door, in moving towards the closed position of the door, reaches the predetermined position, the position sensor is designed to act upon a control device for the transmission.
22. (New) Apparatus according to claim 21, wherein the control device is designed to change from the first gear to the second gear when the position sensor closes or breaks an electrical circuit.
23. (New) Apparatus according to claim 22, wherein the transmission is a gearbox which comprises:
 - a. an input drive shaft,
 - b. on the input drive shaft, a first gearwheel,
 - c. on the input drive shaft, a second gearwheel, which is smaller than the first gearwheel so that the first gearwheel constitutes a larger gearwheel and the second gearwheel constitutes a smaller gearwheel,
 - d. an output drive shaft,
 - e. on the output drive shaft, a third gearwheel meshing with the first gearwheel to produce the first gear,
 - f. on the output drive shaft, a fourth gearwheel, meshing with the second gearwheel to produce the second gear, the said fourth gearwheel being larger than the third gearwheel, so that the third gearwheel constitutes a smaller gearwheel and the fourth gearwheel constitutes a larger gearwheel.
24. (New) Apparatus according to claim 23, wherein the control device is

designed to control the transmission of torque from the input drive shaft to the output drive shaft either via the first gearwheel and the third gearwheel or via the second gearwheel and the fourth gearwheel.

25. (New) Apparatus according to claim 24, wherein the output drive shaft is a hollow shaft and that the control device comprises:
- a. a wedge device which is arranged inside the drive shaft and is moveable in the drive shaft in the axial direction of the drive shaft,
 - b. a first coupling between the output drive shaft and the third gearwheel, the coupling comprising coupling elements arranged in the output drive shaft and designed to be pressed radially outwards through openings in the output drive shaft to engage with the third gearwheel, so that the output drive shaft is thereby torsionally locked to the third gearwheel, and the coupling elements being designed to interact with the wedge device so that the wedge device can press the coupling elements radially outwards,
 - c. a second coupling between the output drive shaft and the fourth gearwheel, the second coupling comprising coupling elements which are arranged in the output drive shaft and are designed to be pressed radially outwards through openings in the output drive shaft to engage with the fourth gearwheel, so that the output drive shaft is thereby torsionally locked to the fourth gearwheel, and the coupling elements being designed to interact with the wedge device so that the wedge device can press the coupling elements radially outwards,
 - d. means for displacing the wedge device axially in the output drive shaft, so that the wedge device can actuate either the first coupling or the second coupling.
26. (New) Apparatus according to claim 25, wherein the means of the control device for displacing the wedge device axially comprise:

- a) a shuttle moveable in a direction perpendicular to the axial direction of the drive shaft,
 - b) on either side of the shuttle an electromagnet which is designed to attract the shuttle,
 - c) on the wedge device, a pin,
 - d) on the shuttle, a first groove having an extension both parallel to the output drive shaft and perpendicular thereto and in which first groove the pin of the wedge device is designed to engage,
 - e) at least one fixed guide plate having a second groove having an extension parallel to the output shaft, and in which second groove the pin of the wedge device is arranged so that movement of the shuttle perpendicular to the axial direction of the drive shaft displaces the wedge device axially in the output drive shaft.
26. (New) Apparatus according to claim 25, wherein the position sensor is connected to the electromagnets so that each electromagnet is activated or deactivated as a function of the position of the sliding door.
27. (New) A vehicle having a body, the vehicle body being designed so that a door opening is defined by the body and a door, the door being designed to slide in the door opening between an open position of the door and a closed position, and the vehicle further comprising an apparatus for opening and closing the sliding door, the said apparatus comprising:
- a. a cable which is connected to the door and is designed to run around pulleys arranged on the vehicle,
 - b. a drive wheel designed to act on the cable,
 - c. a transmission, preferably a gearbox, the transmission being operatively connected to the drive wheel and being designed to transmit power to the drive wheel via at least a first gear and a second gear so that the drive wheel can be driven in a first gear and a second gear, the first gear being a higher gear and the second gear being a lower gear,

- d. a position sensor which is connected to the sliding door or arranged in the door opening of the vehicle and which is designed to detect when the sliding door has reached a predetermined position in the door opening, the sensor being operatively connected to the transmission, so that the transmission changes gear from the first gear to the second gear when the door, in moving towards a closed position, reaches the predetermined position.
- 28. (New) Vehicle according to claim 27, wherein the transmission furthermore has a neutral position so that the drive wheel can rotate freely.
- 29. (New) Vehicle according to claim 28, wherein the transmission is arranged in a housing and that the drive wheel is arranged outside the housing of the transmission.
- 30. (New) Method of fitting an apparatus for opening and closing a door, the method comprising the following steps:
 - a. providing a vehicle with a door opening in which a door is designed to slide between an open position and a closed position,
 - b. providing a cable together with pulleys intended for the cable,
 - c. fitting said cable and pulleys to the vehicle so that the cable is arranged on the vehicle to run around the pulleys,
 - d. providing a drive wheel,
 - e. fitting the drive wheel to the vehicle for interaction with the cable,
 - f. providing a transmission having a first gear and a second gear,
 - g. fitting of the transmission in connection with the drive wheel so that the transmission is operatively connected to the drive wheel, so that the drive wheel can be driven in a first gear and a second gear,
 - h. providing a control device,

- i. fitting of the control device in connection with the transmission so that the control device can act on the transmission in order to change its gear from the first gear to the second gear,
 - j. providing a position sensor,
 - k. fitting of the position sensor in the door opening and establishing of a connection between the position sensor and the control device so that the control device is activated by the position sensor when the sliding door has reached a certain position.
- 31. (New) Method according to claim 30, wherein the transmission has a neutral position so that the drive wheel can be driven in a first gear and a second gear or can rotate freely in a neutral position.